

EC 17 / 19 Series

Cost Effective Single Rail LCD Console User Manual

Rev 2.0

Packing List

The complete EC 17 / 19 package consists of:

- One 1U 19" rack mount console
- Two rails with front and rear bracket
- One VGA cable
- One USB cable
- One DC power adapter
- One power cord
- One user manual CD
- One quick installation guide
- Six flat screws (four for rail mount to console body)

Check to make sure that the unit was not damaged in shipping. If you encounter a problem, contact your dealer.

Please read this manual thoroughly, and follow the installation and operation procedures carefully to prevent any damage to the product, and / or any of the devices that connect to it.

Safety Instructions

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for later reference.
3. Please disconnect this equipment from AC outlet before cleaning. Don't use liquid or sprayed detergent for cleaning. Use moisture sheet or clothe for cleaning.
4. For pluggable equipment, the socked-outlet shall be installed near the equipment and shall be easily accessible.
5. Please keep this equipment from humidity.
6. Lay this equipment on a reliable surface when install. A drop or fall could cause injury.
7. Do not leave this equipment in an environment unconditioned, storage temperature above 60 °C, it may damage the equipment.
8. The opening on the enclosure is for air convection hence the equipment from overheating. DO NOT COVER THE OPENING.
9. Make sure the voltage of the power source connect the equipment to the power outlet.
10. Please keep the power cord such a way that people can not step on it. Do not

place anything over power cord. The power cord must rate for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and the current rating marked on the product.

11. All cautions and warning on the equipment should be noted.
12. If the equipment is not in use for long time, disconnect the equipment from mains to avoid being damaged by transient over-voltage.
13. Never pour any liquid into ventilation openings; this could cause fire or electrical shock.
14. Never open the equipment. For safety reason, qualified service personnel should only open the equipment.
15. If one of the following situations arises, get the equipment checked by service personnel.
 - The Power Cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment has not worked well or you can not get it work according to User's Manual.
 - The equipment has dropped and damaged.
 - If the equipment has obvious signs or breakage.

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1. General Information

1.1 Overview

The KVM console is an ideal solution for network administration with multiple servers / platforms. Their 17-inch and 19-inch large size TFT LCD color display and ultra-low-profile compact industrial keyboard / touchpad provide the user-friendliest and most reliable environment for network administrators. All these functions are integrated in a 19-inch 1U space with rugged construction design to achieve ultra space saving and high reliability for high quality industrial network applications. The KVM console provide superior picture quality and state-of-the-art features mounted in an industrial grade, rack mount console. The console forms a rugged enclosure that protects the monitor from industrial hazards and permits easy access to monitor controls.

The KVM console monitors provide flicker-free color images at optimal resolutions. The monitors' 0.264 x 0.264 mm pixel pitch of 17-inch (0.098 x 0.294 mm pixel pitch of 19-inch) ensures crisp images with clear definition, even at high resolutions. The KVM console monitors are intelligent, microprocessor-based, and have an ergonomically designed display.

The KVM console monitors employ the latest in active matrix thin film transistor (TFT) technology, providing crisp screen images and wide viewing angles.

Unlike CRT monitors, LCD monitors are inherently immune to the magnetic fields commonly found on the plant floor or communications centers. LCDs are also typically brighter than conventional CRT technology, making them ideal for the high ambient lighting conditions found in many of today's factory environments. On-screen menus allow for display adjustments. In addition, the monitors' Plug-n-Play+ features support Windows 95/98,NT and XP, while a universal power supply ensures global applicability.

The KVM console monitors are compatible with most analog RGB (red, green, blue) display standards, including PS/2, optional for Apple Macintosh Centris, Quadra, and Macintosh II family signals. The LCD monitor is capable of displaying crisp and vibrant color graphics with VGA, S2GA, XGA (non-interlaced), SXGA, and most Macintosh compatible color video cards.

1.2 Features

EC 17 / 19 single rail LCD console provides more competitive price and more flexible combination. It keeps all original characteristic of single rail LCD console, easy to install and use. With replaceable keyboard design, you can easily replace more than 5 various keyboards. It saves cost and strengthens your competitive ability.

- Cost effective LCD console
- Replaceable keyboard design
- Single rail easy to install and use
- Support more than 5 various keyboard languages
- Bright Active Matrix TFT display
- OSD function (On Screen Display) for LCD display
- Support USB interface (EC 17 / 19 only)

1.3 Product Specification

1.3.1 EC 17 Specification

Model name	EC 17
Number of ports	1
Dimension	515.1 x 445.6 x 43.7 mm / 20.3 x 17.5 x 1.7 inches
Package Dimension	687 x 558 x 241 mm / 27.0 x 22.0 x 9.5 inches
Net Weight	10.4 Kg / 22.9 lbs
Gross Weight	18.0 Kg / 39.7 lbs
Display Size	17 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1280 x 1024 (SXGA)
Pixel Pitch	Supports 0.264 mm x 0.264 mm
Viewing Angle (CR>10)	Right-Left View 170°(Typ) Up-Down View 160°(Typ)
Contrast Ratio	1000 : 1
Brightness	White 250 cd/m ²
Back Light	Dual Lamps for Back Light
Supported Colors	16.7M Colors (6-bit with FRC)
Response Time	Rising Time 3.8 ms, Decay Time 1.2 ms
Operating System	Dos, Microsoft Windows, Netware, Unix, Linux, MAC, SUN
Multi Platform	Support USB
Connectors	1 x VGA HDDB-15 pin, 1 x USB, 1 x DC jack
System Cables	VGA x 1 + USB x 1 cable
Keyboard Mouse	105 key keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	9.91W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	US, UK, German, French, Russian

Table 1-1. EC 17 Specification

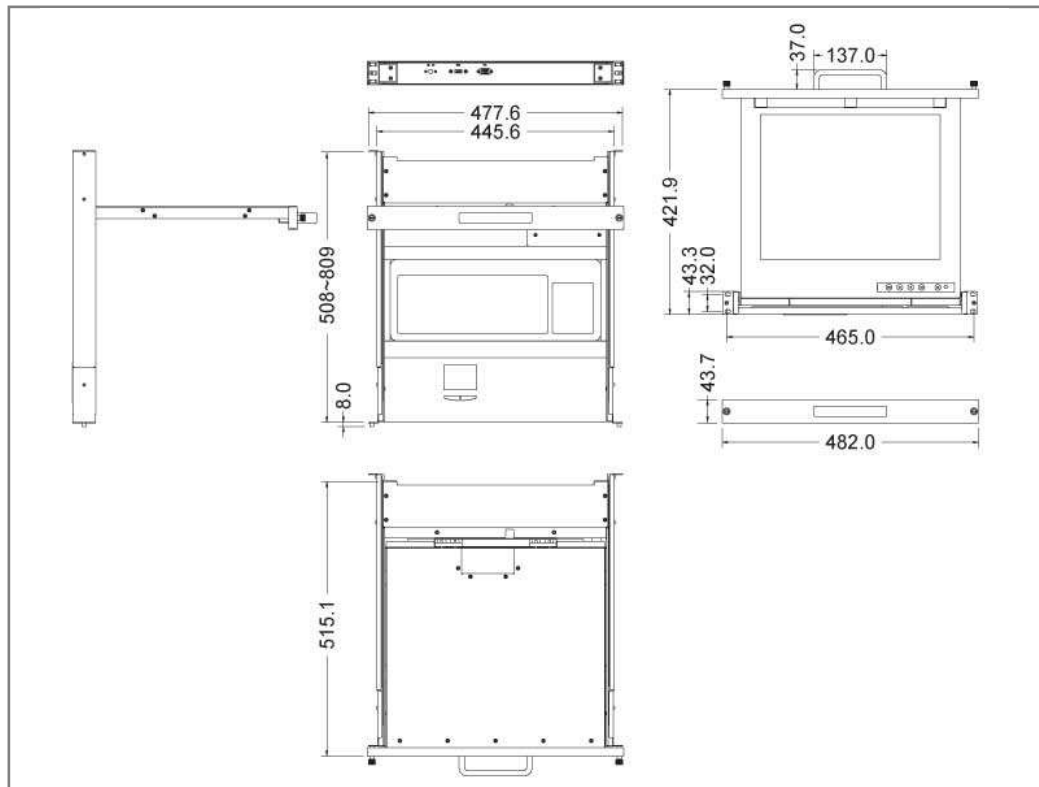


Figure 1-1. EC 17 Dimension

1.3.2 EC 19 Specification

Model name	EC 19
Number of ports	1
Dimension	555.1 x 445.6 x 43.7 mm / 21.9 x 17.5 x 1.7 inches
Package Dimension	727 x 558 x 241 mm / 28.6 x 22.0 x 9.5 inches
Net Weight	11.2 Kg / 24.7 lbs
Gross Weight	19.0 Kg / 41.9 lbs
Display Size	19 inches
Panel Type	Active Matrix TFT LCD
Resolution Capabilities	Maximum Resolution up to 1280 x 1024 (SXGA)
Pixel Pitch	Supports 0.098 mm x 0.294 mm
Viewing Angle (CR>10)	Right-Left View 170°(Typ) Up-Down View 160°(Typ)
Contrast Ratio	1000 : 1
Brightness	White 250 cd/m ²
Back Light	Dual Lamps for Back Light
Supported Colors	16.7M Colors (6-bit with FRC)
Response Time	Rising Time 3.6 ms, Decay Time 1.4 ms
Operating System	Dos, Microsoft Windows, Netware, Unix, Linux, MAC, SUN
Multi Platform	Support USB
Connectors	1 x VGA HDDDB-15 pin, 1 x USB, 1 x DC jack
System Cables	VGA x 1 + USB x 1 cable
Keyboard Mouse	105 key keyboard with touch pad
Sync	45 ~ 80 KHz
Power Source	100 ~ 240 VAC input
Power Consumption	11.03W for Panel
Temperature	Operate 0 ~ 50°C / 32 ~ 122°F Storage -20 ~ 60°C / -4 ~ 140°F
Humidity	10% ~ 90% RH
Chassis Construction	Heavy duty steel materials
Keyboard Language	US, UK, German, French, Russian

Table 1-2. EC 19 Specification

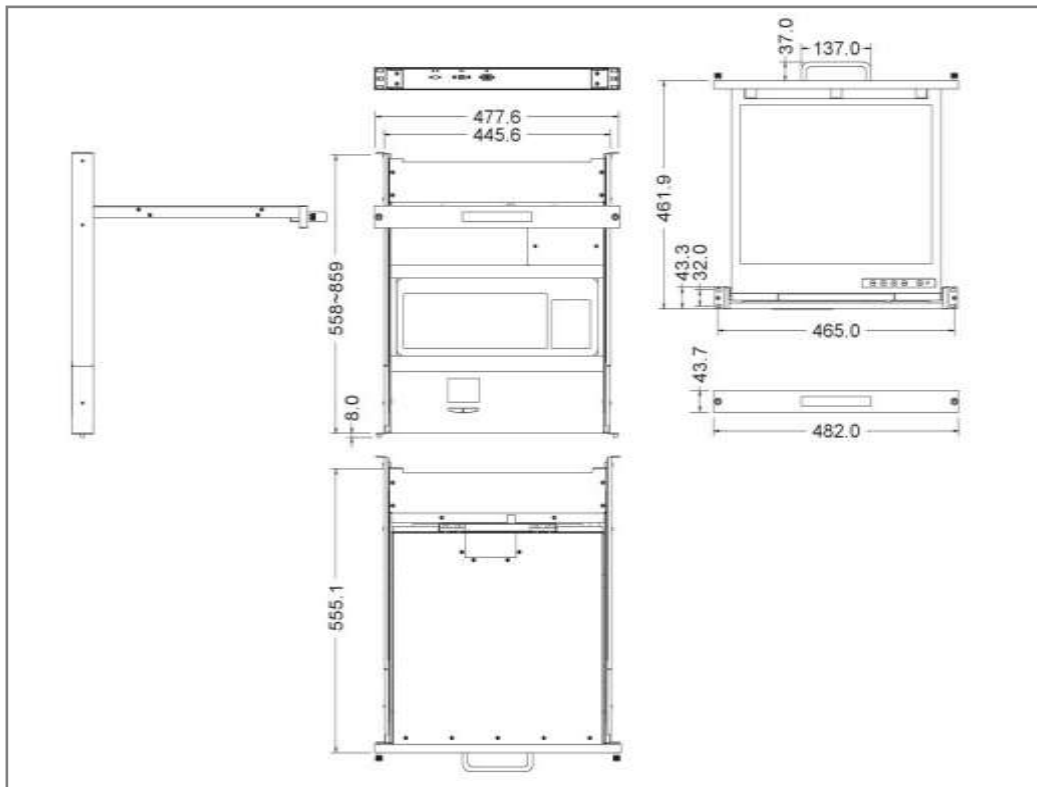


Figure 1-2. EC 19 Dimension

2. Panel Controls and OSD Function

Controls	Description
	Soft power on/off button. Adjacent LED is lit when on.
Auto	Auto-synchronize and scale down display to any valid factory preset timings.
	Press to scroll the function you want to adjust.
	Press to scroll the function you want to adjust.
Menu	To access the main menu. This button also acts as the “Enter” button.

Table 2-1. Panel Controls

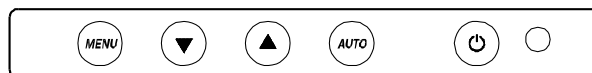


Figure 2-1. EC 17 / 19 OSD Control Bar

2.1 Auto Tune

Press the “auto tune” button. The panel will adjust the display size automatically and also tune the panel to its best condition.

2.2 Input Source

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.

Auto tune.

Input Source

Brightness

Contrast

Color

Position

Language

Recall

Exit

3. Press the “menu” button to enter, and you will see:
VGA / DVI
4. Use the “Down” and “Up” button to select the input source of signal.
5. Press the “menu” button to enter

2.3 Brightness

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.
Auto tune.
Input Source
Brightness
Contrast
Color
Position
Language
Recall
Exit
3. Press the “menu” button to enter.
4. Use the “Down” and “Up” button to adjust the brightness of the display.
5. Press the “menu” button to enter.

2.4 Contrast

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.
Auto tune.
Input Source
Brightness
Contrast
Color
Position
Language
Recall
Exit

3. Press the “menu” button to enter.
4. Use the “Down” and “Up” button to adjust the contrast of the display.
5. Press the “menu” button to enter.

2.5 Color

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.
 - Auto tune.
 - Input Source
 - Brightness
 - Contrast
 - Color**
 - Position
 - Language
 - Recall
 - Exit
3. Press the “menu” button to enter. And you will see:

Icon	Description
9300°K	To set CIE coordinates at 9300°K color
7500°K	To set CIE coordinates at 7500°K color
6500°K	To set CIE coordinates at 6500°K color
User	To set user defined CIE
Auto color	To auto adjust color
Return	To exit and return to the previous page

Table 2-2. Icon Description

4. Use the “Down” and “Up” button to adjust the color of the display.
5. Press “menu” to enter.

2.6 Position

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.
 - Auto tune.

Input Source
 Brightness
 Contrast
 Color
Position
 Language
 Recall
 Exit

3. Press the “menu” button to enter. And you will see:

Icon	Description
Image Pos	To adjust the position of the image.
OSD Pos	To adjust the position of the OSD.
Return	To exit and return to the previous page

Table 2-3. Icon Description

4. Use the “Down” and “Up” button to scroll.
5. Press the “menu” button to enter.

2.7 Language

1. Press the “menu” button.
2. Use the “Down” and “Up” button to scroll.

Auto tune.
 Input Source
 Brightness
 Contrast
 Color
 Position
Language
 Recall
 Exit

3. Press the “menu” button to enter. And you will see:

English
 German
 French

Italian

Spanish

4. Use the “Down” and “Up” button to scroll.

5. Press the “menu” button to enter.

2.8 Recall

1. Press the “menu” button.

2. Use the “Down” and “Up” button to scroll.

Auto tune.

Input Source

Brightness

Contrast

Color

Position

Language

Recall

Exit

3. Press the “menu” button to enter, and you will see:

Yes/ No

4. Select “Yes” button then ‘Menu” button to recall the factory setting.

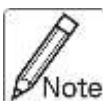
Select “No “ to return to the previous page.

2.9 Exit

Press the “exit” button to quit OSD menu.

2.10 Power Indicator

- ♦ GREEN ON
- ♦ RED STANDBY
- ♦ RED SUSPEND
- ♦ RED OFF



OSD – On Screen Display

3. Installation

3.1 Install LCD Console Into Cabinet

3.1.1 Notes

1. Please check all peripherals according the list before installation. To make sure that the whole unit was not damaged and lost during shipping process. If you encounter any problem, please contact your dealer.
2. Before installation, make sure all peripherals and computer have been turned off.
3. The cabinet depth range must be in 508 ~ 809 mm for 17" LCD console (558 ~ 859 mm for 19" LCD console. Contact your dealer for deeper cabinet application.

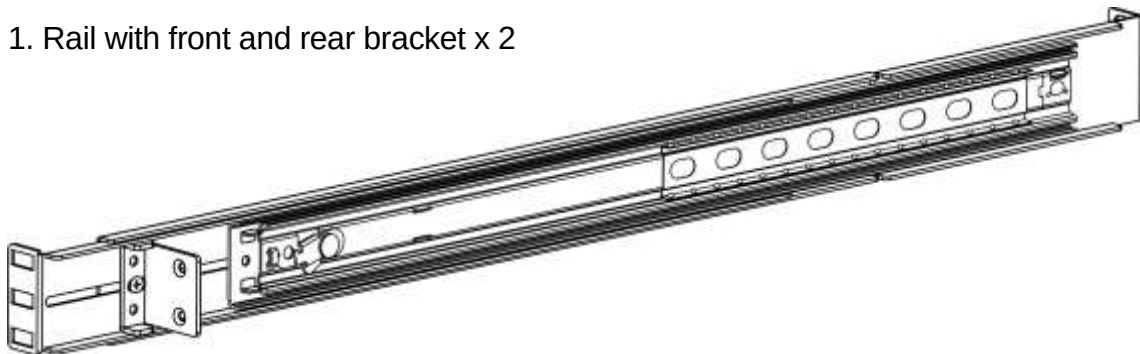
Model Name	Adaptable Cabinet Depth
EC 17	508~809 mm
EC 1708 / EC1716	600~901 mm
EC 19	558~859 mm
EC 1908 / EC1916	650~951 mm

Table 3-1. Adaptable Cabinet Depth Description

4. Reliable grounding of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit.

3.1.2 Hardware Kits Contents

1. Rail with front and rear bracket x 2

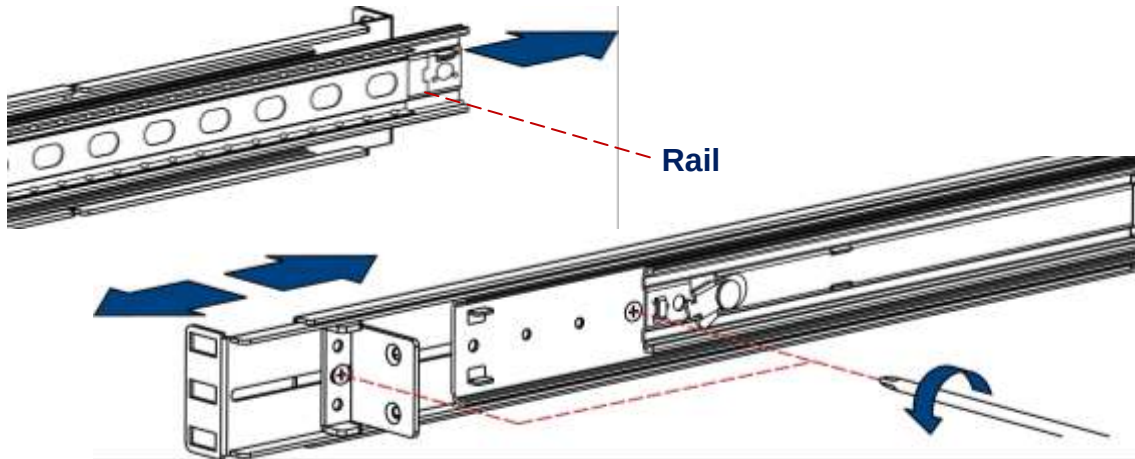


2. Screw (length = 6 mm) x 6



3.1.3 Installation Steps

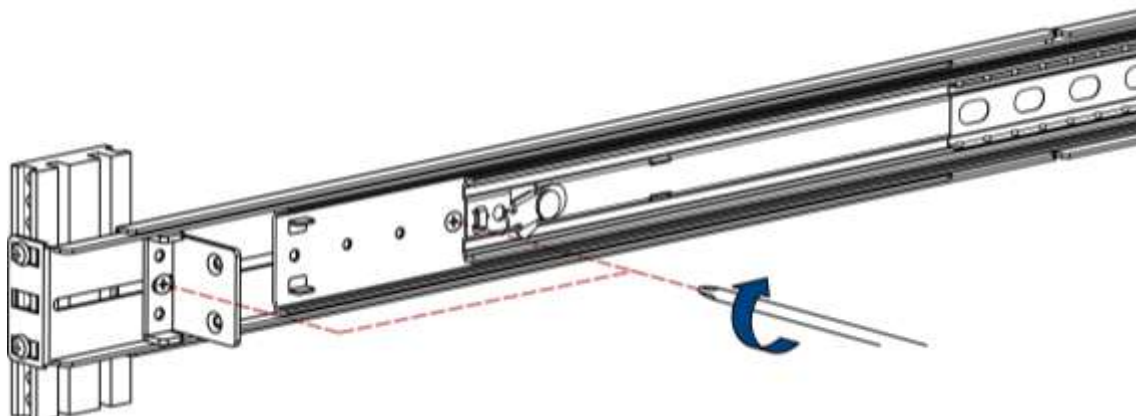
1. Adjust rail until one screw appear. Loose (Not release) two rear screws then adjust rear bracket to fit your cabinet.



2. Install front and rear bracket on cabinet.

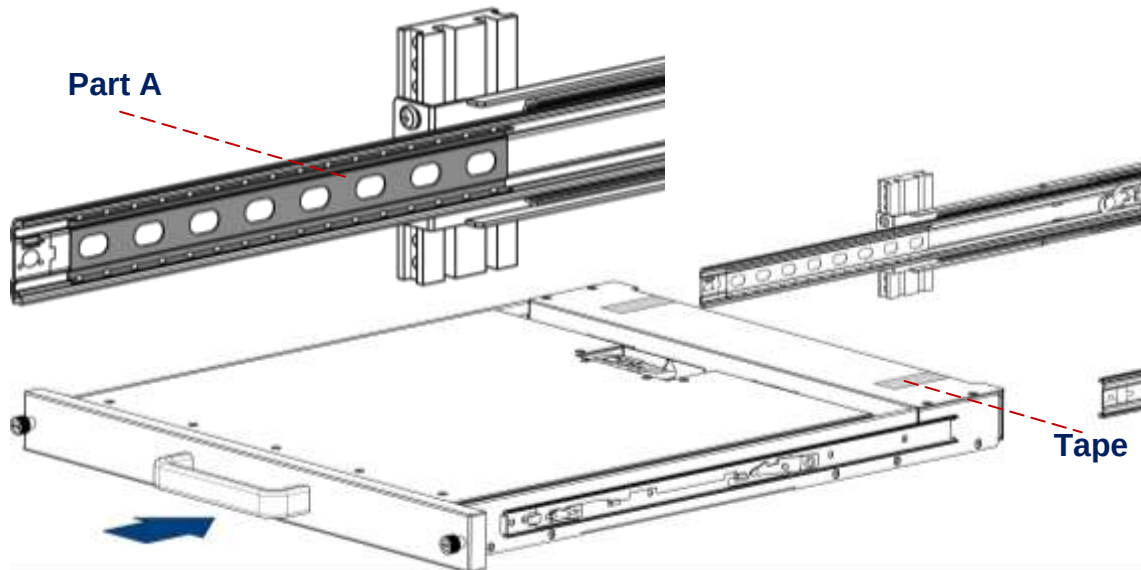


3. Tight-up two rear screws.

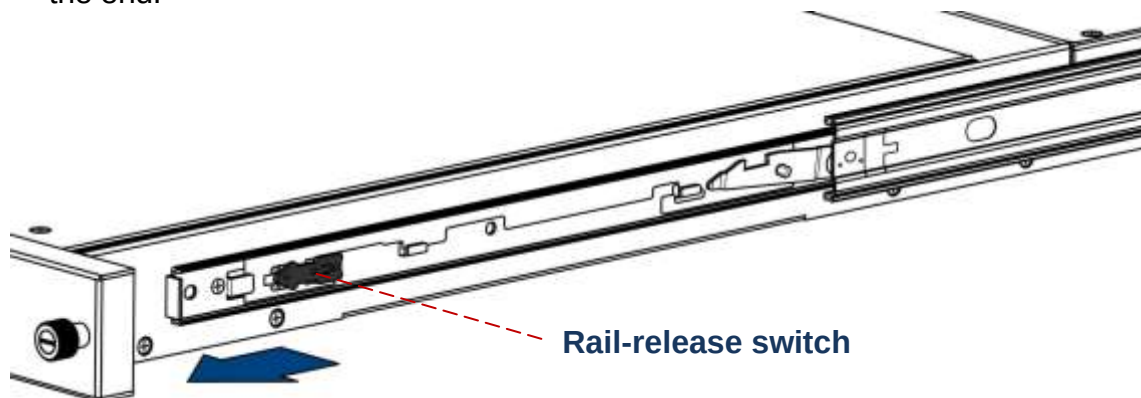


4. Repeat step 1~3 for the other side.

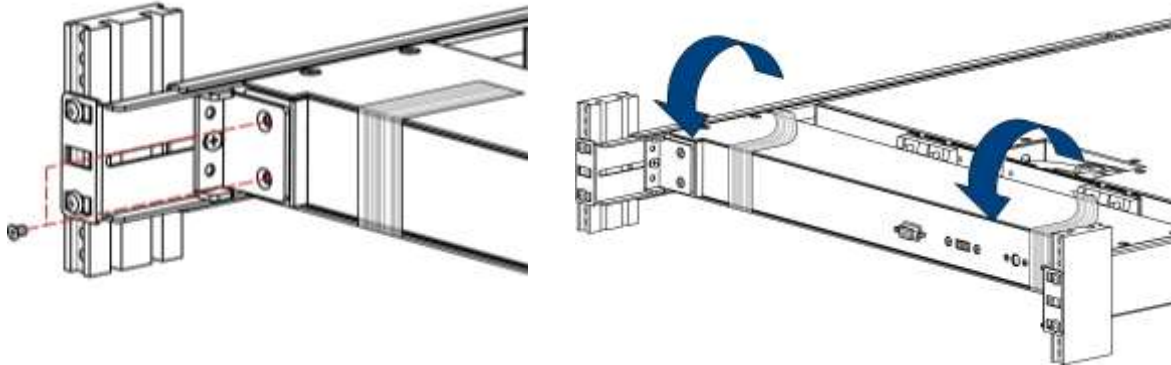
5. Pull rail until it lock and keep the part A in front of the rail (Both sides).Then push console into left and right rails. DO NOT removes protective tapes.



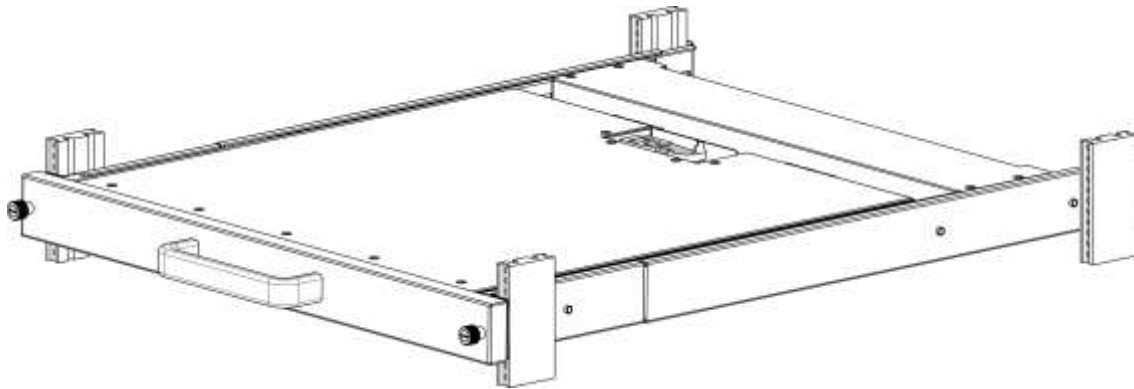
6. Pull rail–release switch (left and right at the same time) then push console to the end.



7. Install two screws in rear of the console (Both sides). Remove protective tapes.

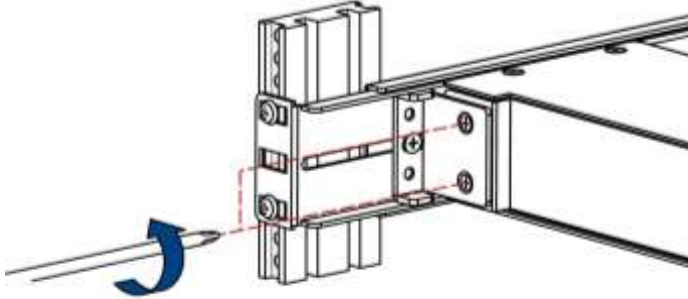


8. Finish installation as below.

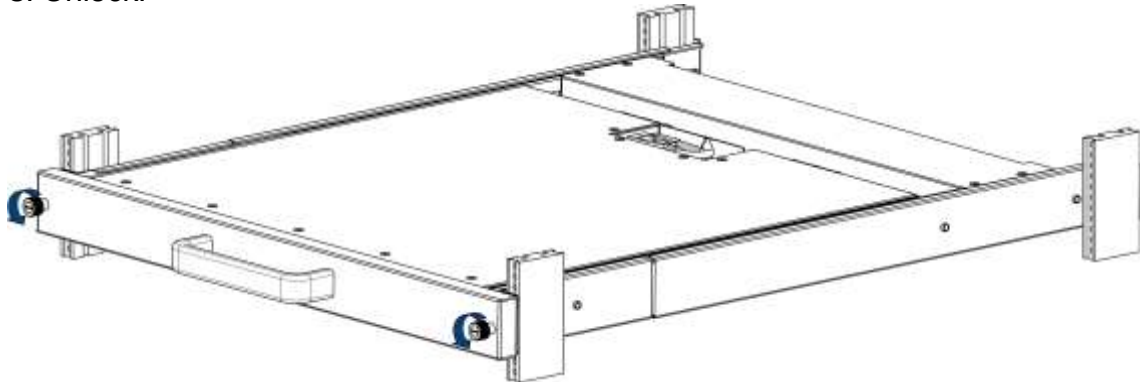


3.1.4 Unload Steps

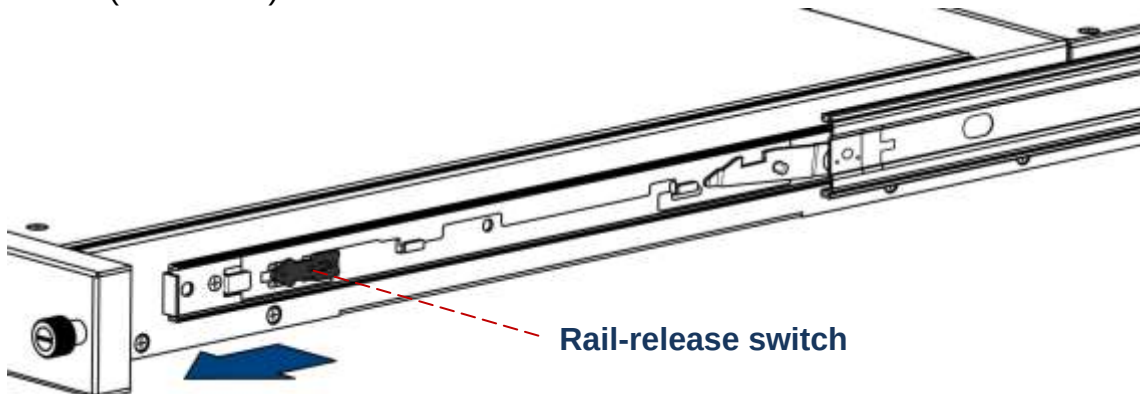
1. Make sure the console has locked and turned off.
2. Release two screws in rear of the console. (Both sides)



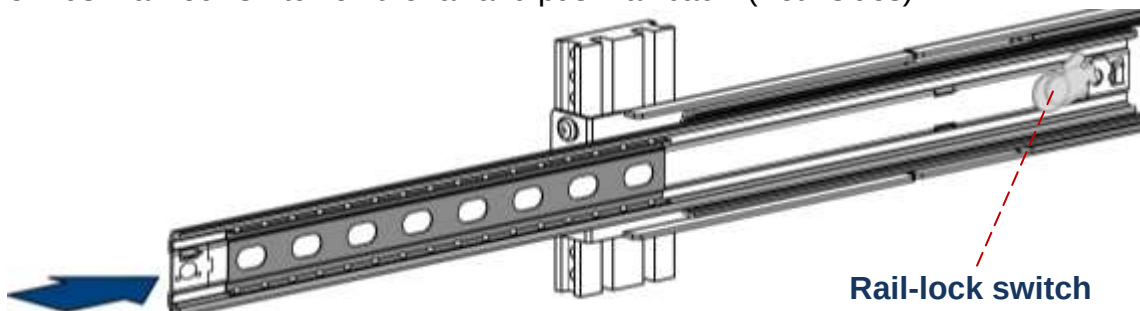
3. Unlock.



4. Pull the console all the way out. Then pull rail-release switch and pull console out. (Both sides)



5. Push rail-lock switch on the rail and push rail back. (Both sides)



3.2 Installing the Video Card and Video Driver

Before connecting the LCD console, make sure your computer has a video card already installed for the monitor. After you connect the console, install the video software driver. The video driver is supplied by the video card manufacturer and may be found on the CD-ROM that came with your computer. If you need information on installing a video card or video driver, refer to the manual that came with your video card.

3.2.1 Configuring the Display Settings

After connecting the console and turning on your computer, you may need to configure one or more of the following display settings:

- Display mode (also called desktop area or video resolution)
- Refresh rate (also called vertical scan rate or vertical sync)
- Color depth (also called color palette or number of colors)

Each video card has several controls that let you adjust the display settings. However, the software and driver for each video card is unique. In most cases, you adjust these settings by using a program or utility provided by the manufacturer of the video card. Most video cards use the Windows Display Properties control panel to configure the display. To open the Windows Display Properties, click the right mouse button in a blank area of the Windows desktop and then select **Properties**. The Settings tab usually lets you change the Color Palette and the Desktop Area (x by y pixel resolution).

Some video cards integrate additional features into the Windows Display Properties control panel to give you an exceptional setup that is flexible and easy to use. For example, the control panel may include an Advanced Properties button, an Adjustment tab, or a Refresh tab for changing other settings. Other video cards have a separate utility for setting display properties.

Whenever you change the resolution, color, or refresh rate, the image size, position, or shape may change. This behavior is normal. You can readjust the image using the monitor on-screen controls. For more information on the monitor on-screen controls, refer to Chapter 2. For more information on configuring the display settings, refer to the manual that came with your video card.

3.2.2 Connecting the Console

To connect an LCD console to a computer, perform the following steps



Figure 3-1. The rear view of LCD console

1. Turn off your computer. You should always turn off your computer before connecting or disconnecting a device.
2. Connect the video (VGA) connector of the VGA cable to the video card connector on the rear panel of your computer.
3. Connect connector of USB cable to USB ports on the rear panel of your computer.
4. Connect the AC to DC power adapter to the power inlet on the console and then to a power outlet.

3.3 Turning on the Console

Make sure all cables and the AC to DC power adapter are connected properly. Be sure to tighten all connector screws. Grab the front handle. Pull the console all the way out then lift the panel up. The power LED underneath the LCD monitor will be green light.

3.4 Testing the Console

To test that the console is working properly, perform the following steps:

1. Power up the console, and then turn on your computer.
2. Make sure the video image is centered within the screen area. Use the OSD controls to adjust the image (see note below) or press the Auto button underneath the LCD monitor.



If the unit does not power on when the panel is pulled up, try to push the power on/off button underneath the LCD monitor to power up the unit.



You can adjust the horizontal and vertical position, contrast, and brightness to better suit your video card and your personal preference. Refer to Chapter 2 for more information on using the on-screen menu to adjust the video display.

Before you begin, make sure that powers to all the devices you will be connecting up have been turned off. To prevent damage to your installation due to ground potential difference, make sure that all the devices on the installation are properly grounded. Consult your direct vendor for any technical issues if necessary.